United States Department of Agriculture | Forest Service | George Washington and Jefferson National Forests | Lee Ranger District
95 Railroad Avenue
Edinburg, VA 22824

Date: August 27, 2015

Dear Interested Party:

The George Washington and Jefferson National Forest is initiating scoping for the continuation of seven Lee Ranger District Prescribed Fire Projects and is requesting your input in the process in accordance with the National Environmental Policy Act.

The Lee Ranger District Prescribed Fire Projects include seven existing burn units, totaling approximately 10,000 acres of National Forest land, or 5% of the Lee District. These burn units are located in the following counties: Shenandoah, Page, and Rockingham, VA. The following Management Areas from the recently revised 2014 George Washington National Forest Land and Resource Management Plan (Forest Plan) are represented within the project area: 2C3, 4D, 7B, 7C, 7G, 12D, and 13. A map of the units is attached.

Proposed Burn Units

Unit Name	Approx. Acres	County, State	Management Area(s)	Prescribed Burn History (year burned)
Catback	2690	Page, VA	7B: Scenic Corridors 12D: Remote Backcountry Areas 13: Mosaics of Habitat	2005, 2009, 2013
Cub Run	3577	Page & Rockingham, VA	12D: Remote Backcountry Areas	2014
Indian Grave Ridge	338	Page, VA	2C3: Eligible Recreational Rivers 7G: Pastoral Landscapes 13: Mosaics of Habitat	1997, 2003, 2010, 2014
Little Schloss	1556	Rockingham & Shenandoah, VA	12D: Remote Backcountry Areas	2003
Moody	325	Page, VA	7G: Pastoral Landscapes	1993, 1996, 2001, 2012
Second Mountain	1119	Rockingham, VA	12D: Remote Backcountry Areas 4D: Special Biological Areas	1995, 2004, 2010
Waonaze	768	Shenandoah, VA	7C: ATV Use Areas 13: Mosaics of Habitat	2006

Background

Young forests include a diverse mix of food producing shrubs, tree seedlings, and saplings, along with openings where grasses and wildflowers grow. Today, this important habitat is dwindling in our region. Fire is one tool to restore young forests and improve wildlife habitat. Fire has played a major role in shaping vegetation communities in the Appalachian Mountains.

The George Washington and Jefferson National Forests are dependent on fire to remain healthy and to provide optimal habitat for a diversity of plants and animals. Wildlife populations such as white-tailed deer, black bears, turkey, quail, squirrels, eastern cottontails and many migratory birds benefit from forest openings and increased food and cover that flourish after a fire.

Fire has played a major role in shaping vegetation communities in the Appalachian Mountains for thousands of years. Recent research on fire-scarred trees on the Forest and nearby in the Appalachians have found that fires occurred periodically, often every 3-9 years, dating back to the mid- 1600's. Soil charcoal records show that fire has been a part of these mountains for at least 10,000 years. Lightning caused some fires. Native Americans intentionally set others to help open the forest understory, which increased plant diversity, improved browse for wildlife and made travelling easier. Early European settlers continued to use fire to shape their surroundings, clearing land and provide forage for grazing livestock and improved habitat for wildlife.

However, after the turn of the 20th century, the number of people in the mountains had significantly increased and fires began to be seen as destructive, so state and federal agencies aggressively suppressed fires. The subsequent absence of fire over the past 80-100 years has transformed the forests. There are fewer grasses and other open habitat plants, there are more shrubs and trees that are not adapted to fire, and the total number of trees per acre is unnaturally high. Oaks and some species of pines are also having trouble regenerating in the now closed canopy conditions.

Periodic prescribed fire can benefit oak and pine forests by increasing sunlight to the forest floor and promoting seed germination. Fires also reduce competition from species such as red maple, tulip poplar and white pine. A series of burns can also promote native grasses and wildflowers, thin crowded forests, and provide food for wildlife.

Existing Conditions

All of the proposed prescribed burn units have been prescribed burned at least once (some 2 to 4 times, see table above) in the past 20 years. Prior to implementation of prescribed burns these areas had been virtually fire-free for the past 70 to 80 years due to an aggressive wildfire suppression program.

Over time as the tree canopy grew closer together reducing the amount of sunlight reaching the forest floor, shade tolerant and fire intolerant tree species such as red maple and white pine have become more common in the understory. In the absence of disturbance, shade tolerant trees could become more dominant than oaks in future stand composition since most oaks in our area are intolerant to continuous shade and not able to compete with vegetation that has a high shade

tolerance. Shade also decreases the vigor, flowering, and fruit production of shrubs such as blueberries and huckleberries As the amount and cover of oak and fruit bearing shrubs decline, the amount of acorn and soft mast will decrease and negatively affect wildlife species such as grouse, turkey, deer, and squirrels.

The forest resources within these areas are still primarily comprised of upland hardwoods, with some areas of mixed yellow pine/hardwood stands. The more mesic sites support northern red oak, yellow poplar, chestnut oak, black oak and red maple. Drier, more westerly aspects, typically support chestnut oak, black oak and scarlet oak mixed with stands that are dominated by a significant pitch and table mountain pine component. The Indian Grave Ridge and Moody Tract units near the South Fork Shenandoah River also contain significant grass/forb habitat.

The burn units that have had multiple prescribed fire entries (Catback and Second Mountain) are now developing a more open overstory and midstory, resulting in more sunlight reaching the forest floor. Approximately 10% to 20% of most units have had patches of overstory tree mortality that has resulted in a mosaic of open vs. closed canopy conditions. Second Mountain has a larger percentage of early successional habitat. Areas of concentrated early successional areas throughout all burn units tend to be on the pine and oak dominated drier south to west facing slopes where fuel conditions allowed the fire to burn hotter. Treated areas are now dominated by an increasing variety of grasses and forbs along with a vigorous shrub layer. Blueberry, huckleberry, and chinquapin are now common and produce abundant fruit the second year following each burn.

Second Mountain contains variable sedge within a Special Biological Area (SBA), which is a rare species that occurs in habitats that experience regular fire intervals and is enhanced through prescribed burning.

Even with the prescribed burning done to date, the condition of habitat structure and composition of vegetation does not yet meet the desired Future Condition listed in the George Washington National Forest Plan. Shade tolerant and fire intolerant trees and shrubs still have abundant reserves in their root systems to sprout vigorously once top killed and must be burned repeatedly to be suppressed or eliminated. Overstory density is still too high in some areas and tree canopies are in a closed condition.

Desired Conditions

The proposed burns cover numerous management areas; however some themes are carried through most management areas. For example, one goal of the Forest plan is to create more **open woodlands**. Created and maintained largely by periodic fire disturbance regimes, open woodlands are characterized by an overstory of trees that are spaced far enough apart to allow sunlight to reach the forest floor. This allows the development of a grassy/shrubby/herbaceous understory more typical of early successional forest and grassland/shrublands. Many species depend on the juxtaposition of both overstory mature and a well-developed grassy/shrubby/herbaceous understory for their life cycle needs. In this structural condition, canopy openings range from individual or multiple tree gaps to widely spaced trees with open-grown crowns (GW Plan 2-13).

Part of the vision of the Forest Plan is to create open woodland settings and forest structures to support native plant and animal species by mimicking disturbances within the natural range of variability. Management is directed at developing landscapes that represent typical disturbance regimes for each ecological system. For instance, restoration of historic fire regimes, including appropriate return intervals, seasonality, and intensity, is inherent to sustaining native ecological systems such as Pine Forests and Woodlands. While it may take many decades to completely achieve these ecosystem conditions, actions initiated and continuing during the next 10 to 15 years would set the stage for continued progress (GW Plan 3-5).

The following table presents definitions of the vegetative conditions, or structural classes, listed in the Forest Plan.

Open	Land with less than 10 percent canopy cover in permanent or long-term open condition (grasslands, barrens, etc.; not timber harvest regeneration)
Early	Stands developing after a major disturbance or timber harvest, generally less than 11 years in age in the most common systems, but can be up to 35 years
Mid-Open	Stands beyond regeneration that stay in a relatively open canopy (canopy closure of 25-60%)
Mid-Closed	Stands beyond regeneration where the canopy closes (canopy closure of 61% or greater)
Late-Open	Stands reaching older ages of mature trees (50-100 years or greater) and more lasting structural conditions with overall open canopy (canopy closure of 25-60%; typical of an area being thinned)
Late-Closed	Stands reaching older ages of mature trees (50-100 years or greater) and more lasting structural conditions with a largely closed canopy (all layers) greater than 60%, includes natural canopy gaps

The next table represents the desired (and existing) conditions for structural conditions in the ecological systems that are most prevalent in the Project areas.

Desired vs Existing Structural Conditions on the Lee District

OAK FOREST & WOODLANDS	Early	Mid-Open	Mid-Closed	Late-Open	Late-Closed
Desired %	12	10	7	57	14
Existing %	3	0	12	2	83
PINE FOREST & WOODLANDS	Early	Mid-Open	Mid-Closed	Late-Open	Late-Closed
Desired %	13	25	3	54	5
Existing %	4	0	10	2	83
COVE FOREST	Early	Mid-Open	Mid-Closed	Late-Open	Late-Closed
Desired %	4	0	39	9	48
Existing %	2	0	26	0	72

Purpose and Need

The purpose and need for the proposed treatments include increasing the amount of open woodlands present in the project areas and mimicking natural fire behavior to benefit fire-adapted species in the area, and improve wildlife habitat for a wide range of species who depend on a depend on the juxtaposition of both overstory mature and a well-developed grassy/shrubby/herbaceous understory. In addition, proposed burns would benefit fire-adapted species, such as box huckleberry, variable sedge, and Table Mountain and pitch pines; reduce fuel accumulation in order to better protect national forest and adjacent ownerships from wildfire; reduce undesirable shade tolerant species, such as red maple and white pine, and allow for regeneration of desirable species.

Prescribed fire is an important management tool that would move these units toward the desired condition of structure and composition specific to each ecological system.

The following objectives and outcomes are part of this project:

- Provide for firefighter and public safety.
- Decrease canopy cover in some areas in order to promote fire-dependent and fire-adapted species and restore open oak and pine woodlands.
- Decrease the leaf-litter and duff layer and expose patches of mineral soil to enhance pine regeneration.
- Increase soft and hard mast production.
- Decrease non fire-adapted woody vegetation.
- Maintain or increase grassland openings.
- Maintain or increase species of concern in Special Biological Areas.
- Reduce hazardous fuels.

Proposed Action

The Forest Service proposes using prescribed fire several times over 10-15 years to move the project areas toward their desired future condition(s).

Typically burns occur in late winter and spring or fall when the fuel moistures are low enough to carry the fire, yet burn cool enough to not fully affect the over-story canopy or advanced regeneration. Depending on the seasonal weather, appropriate conditions may be present at any time of the year. Ignition of these units may be executed through both aerial and hand firing methods. The ignition patterns would be planned to foster low to moderate fire intensity by igniting the uphill areas first, thus creating a backing fire to minimize scorching of over-story trees; however, scattered patches of over-story mortality would be expected. Due to the varying sizes of the units, and the desire to mimic fire's natural role in the ecosystem, multiple days of ignition may necessary on the larger units. All of these units have previously been burned, and therefore have established firelines which primarily use pre-existing trails and roads. Dead trees that pose safety or holding concerns along the unit boundaries would be felled or lined prior to implementation.

In order to improve and restore the habitats present in the Project areas, prescribed burning would be carried out over 10 to 15 years and would include appropriate fire return intervals,

seasonality, and fire intensity. A prescribed fire burn plan would be completed for each unit prior to implementation. This tactical implementation plan would specify parameters, such as weather and fuel conditions, that must be observed before and during implementation. The burn plan also includes resource coordination requirements. These coordination requirements include provisions for public and firefighter safety, contingency plans for escaped fire, notifications of appropriate agencies and persons, smoke management guidelines to ensure compliance with air quality regulations, and mop-up and patrol procedures. An appropriate number of trained fire management specialists, as specified in the burn plan, would perform all burning operations.

An adaptive management strategy would be used to ensure that the most current and relevant knowledge, experience, and methods are considered and utilized to achieve the desired conditions of this area in a timely and efficient manner. Experience and results from prescribed fire implementation elsewhere on the Forest and by prescribed fire practitioners elsewhere in the Appalachians would be utilized as burns are implemented through the years. Locally, examining the effects of various fire frequencies and seasonality of burns on forest stand dynamics would also be examined. Monitoring pre- and post-burn vegetative conditions would be used to assess conditions and to track or refine objectives.

Since all of the burn units have been previously burned, no dozer line construction is expected.

Ecosystem Assessments and Specialist Input

A Biological Assessment/ Biological Evaluation of the Project areas will be conducted in order to: 1) ensure that Forest Service actions affecting plant and animal species do not contribute to trends that may contribute to federal listing in the future, 2) comply with the requirements of the Endangered Species Act (ESA) so that federal agencies do not jeopardize or adversely modify critical habitat (as defined in ESA) of federally listed species, and 3) provide a process and standard to ensure that threatened, endangered, proposed, and sensitive species receive full consideration in the decision-making process.

Specialists within the Forest Service and partnering agencies will provide input during the planning process regarding soils, hydrology, wildlife, timber, silviculture, recreation, and archaeological concerns.

Public Involvement

Supporting documentation is available at:
www.fs.usda.gov/projects/gwj/landmanagement/projects or at the Lee Ranger District, 95 Railroad Avenue, Edinburg, VA. 22824. For additional information regarding this project please contact: Tom Ledbetter, North Zone Fire Management Officer, 540-432-0187, or tjledbetter@fs.fed.us.

We encourage and welcome your involvement with these decisions. We are currently preparing an environmental assessment for these proposed burns, subject to public involvement and the determination of effects. The proposed project implements a land management plan and is

subject to pre-decisional objection process at 36 CFR §218 Subparts A and B. In accordance with 36 CFR 218.5 individuals or organizations wishing to be eligible to submit objections seeking Pre-decisional Administrative Review must provide the following information: a) Your name and address; b) Title of the Proposed Action; c) Specific comments (§ 218.2) on the proposed action, along with supporting reasons that the Responsible Official should consider in reaching a decision; and d) Your signature or other means of identification verification must be provided for the individual authorized to represent your organization. Although comments are accepted at any time before a final decision is made, they must be postmarked or received within 30 days beginning the day after publication of the legal notice in the Shenandoah Valley Herald in order to be eligible for the objection process. When a decision is made, we will promptly mail the appropriate decision and analysis documentation to those who participated in the process or who specifically request the information.

Written comments must be submitted to:
Kathleen Donahue
District Ranger
Lee Ranger District
95 Railroad Avenue
Edinburg, VA 22824
Office: 540-984-4101
Fax: 540-984-8989

The office hours for those submitting hand-delivered comments are: 8:00 am to 4:30 pm Monday through Friday, excluding holidays. Electronic comments must be submitted in a format such as an email message, plain text (.txt), rich text format (.rtf), or Word (.doc, .docx) to *comments-southern-georgewashington-jefferson-lee@fs.fed.us*. For objection eligibility, each individual or representative from each entity submitting timely and specific written comments regarding the proposed project must either sign the comments or verify identity upon request.

Please state "Lee Prescribed Fire Projects" in the subject line when providing electronic comments, or on the envelope when replying by mail.

Kathleen K. Donahue
District Ranger

8/27/15
Date

Lee Ranger District
Prescribed Fire Projects